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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,095	08/21/2001	Hiroyuki Kado	NAK1-BN30a	8004

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PRICE and GESS
Suite 250
2100 S.E. Main Street
Irvine, CA 92614

EXAMINER

RAMSEY, KENNETH J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 06/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/934,095

Applicant(s)

KADO ET AL.

Examiner

Kenneth J. Ramsey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 111-130 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 111-130 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Petition to make special

While the petition to make special filed August 21, 2001, did not supply the items (c) and (d) required in M.P.E.P. 708.02 for petitions under 37 C.F.R. 1.102, the petition to make special filed in parent case 09/720,015 supplied the missing items as the same search and references were referred to in each petition. A review of the interference files did not turn up any patent application that may interfere with this application. Although the present case has not been made special; it is deemed appropriate for the examiner to also take up this related case for action at the same time as the parent case, which contains the missing papers and which has been made special. Applicants may wish to take the appropriate steps to assure the present case is also taken up special in the future.

Anticipation

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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2. Claims 117, 118, 120, 122-125, 128 and 130 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Inoue et al.

Obviousness

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 111-130 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al (6,236,159) in view of MacNair (3,492,598). Inoue discloses a process of purging a plasma display panel impurities including introducing a cleaning gas through a first vent opening while exhausting a purging gas through a second opening. Barriers 29a are provided to cause the gas to flow between the barrier ribs (partitions) 29 in a uniform manner. Inoue further includes the step of discharging electrodes within the display panel to aid in the gas purging operation. . As to the structure of the partitions and sealing glass, note inoue, figures 3, 5, 6, 8 and 13 of Inoue. Inoue differs from the claimed invention at most by the purity of the purging gas. However, since the process is intended to clean the display panel, it would not make sense to purposely introduce impurities into the display panel that are known to shorten the life of a display panel, such as water vapor. Also, the use of high purity argon (99.996 percent) is well known as a flushing gas in similar processes. Thus to use a dry, high purity argon gas in the process of Inoue would have been obvious to one of ordinary skill in the art.

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5. Claims 111 – 118, 120, 126 and 127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al in view of MacNair. Itoh, column 4, line 24, through column 5, line 28 discloses a process of flushing a display device with a hydrogen gas at 350 °C and alternating the flushing with as many as 8 periods of conducting a gas discharge of the display to facilitate “gas cleaning”. Those of ordinary skill in the art familiar with term “gas cleaning” would recognized that an electric discharge is produced which ionizes gas molecules in the display device so that ions bombard the cathode and knock loose gaseous impurities therefrom. The process of Itoh et al is said to result in a significantly longer life of the display device whereas prior art gas cleaning processes which did not include repetitive “gas cleaning” and flushing failed to result in improved life of the display (column 2, lines 17-42). Itoh et al, column 7, lines 28-35, further teaches substituting argon gas for the hydrogen gas. Itoh et al differs from claim 126, in that the partial pressure of water vapor in the purging gas was not disclosed and differs from claim 112 in that a plurality of aging steps in which a gas discharge is produced are claimed such that the gas flushing is conducted between the aging step. MacNair discloses gas cleaning of a cathode including flowing a high purity (99.996 percent) argon gas stream through the tube at a pressure of less than 1 torr while discharging the electrodes. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have employed a clean hydrogen atmosphere with the partial pressure of steam being less than 15 torr since water vapor is a well known gas contaminate of display devices which should be removed. It would make no sense to reintroduce the same contamination being removed in the gas cleaning step of Itoh et

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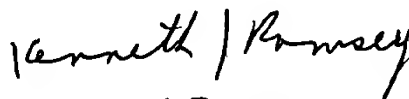
al. As to the step of conducting the aging between gas flushing steps, it is first required that the atmosphere be sufficiently flushed and evacuated such that there is no substantial damage to the internal components by oxidation or by ion bombardment. Therefore, a gas flush must be conducted prior to aging. Also, aging is known to result in gas impurities being released that detract from the life of the display and which may cause damage to the cathodes by ion bombardment during the aging. Therefore a gas flush is required at least intermittently to remove any high levels of gaseous impurities that may result from aging. As to claim 126, high purity argon is a dry gas. Thus, the claimed process (including claim 126) is clearly obvious. As to claims 116, 117, 118, 120, and 127, it is well known to include barrier walls in gas discharge display panels to limit the cross talk between adjacent pixels. Since those barrier walls limit the gas in one direction, the gas must flow in the direction of the barrier walls such that the cathodes are cleaned. To enable an uniform gas flow across each cathode, it further would have been obvious for one of ordinary skill in the art to provide adequate space at the ends of the barrier walls to allow for gas to freely access each passage from the inlet and to then flow to the outlet. As to the location of the inlet and outlet, claim 120, it is a common expedient to locate the same at the vicinity of the outermost partitions and on opposite sides of a series of parallel flow barriers. A common example being the automobile radiator.

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Directions for Responses

Any formal response to this communication should be directed to examiner Kenneth Ramsey, Art Unit 2879, and either faxed to: 703-872-9318; or mailed to: Assistant Commissioner For Patents Washington, D.C. 20231

Technical inquiries concerning this communication should be directed to Kenneth J. Ramsey, (703) 308-2324 (voice), (703) 746-4832 (fax).



Kenneth J. Ramsey
Primary Examiner
Art Unit 2879